

1. A method of generating a shadow in a virtual three-dimensional (3D) space, comprising:

adjusting a resolution of a 3D model;

projecting elements of the 3D model onto a surface in the
5 virtual 3D space; and

rendering a shadow having the adjusted resolution of the
3D model on the surface using the projected elements.

2. The method of claim 1, wherein the elements of the 3D
10 model are projected based on a location of a virtual light
source in the virtual 3D space.

3. The method of claim 2, wherein the virtual 3D space
includes a second virtual light source; and

15 the method further comprises:

adjusting the resolution of the 3D model to a second
resolution;

projecting elements of the 3D model onto a second
surface in the virtual 3D space based on a location of
20 the second virtual light source; and

rendering a second shadow having the second
resolution on the second surface using the elements
projected on the second surface.

4. The method of claim 1, wherein adjusting comprises reducing the resolution of the 3D model.

5 5. The method of claim 4, wherein adjusting comprises removing elements of the 3D model.

6. The method of claim 5, wherein the 3D model comprises a multi-resolution model.

10 7. The method of claim 1, further comprising:
providing a user interface for use in adjusting the
resolution of the 3D model.

15 8. The method of claim 1, further comprising:
rendering the 3D model at its original resolution.

9. The method of claim 1, wherein the elements comprise vertices of the 3D model.

20 10. The method of claim 1 wherein the elements comprise polygons of the 3D model.

11. An apparatus for generating a shadow in a virtual three-dimensional (3D) space, comprising:

a memory that stores executable instructions; and

a processor that executes the instructions to:

5 adjust a resolution of a 3D model;

project elements of the 3D model onto a surface in the virtual 3D space; and

render a shadow having the adjusted resolution of the 3D model on the surface using the projected elements.

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12. The apparatus of claim 11, wherein the elements of
3D model are projected based on a location of a virtual
source in the virtual 3D space.

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13. The apparatus of claim 12, wherein the virtual 3D space includes a second virtual light source and the processor executes instructions to:

adjust the resolution of the 3D model to a second resolution;

20 project elements of the 3D model onto a second
surface in the virtual 3D space based on a location of
the second virtual light source; and

render a second shadow having the second resolution on the second surface using the elements projected on the second surface.

5 14. The apparatus of claim 11, wherein adjusting comprises reducing the resolution of the 3D model.

10 15. The apparatus of claim 14, wherein adjusting comprises removing elements of the 3D model.

15 16. The apparatus of claim 15, wherein the 3D model comprises a multi-resolution model.

20 17. The apparatus of claim 11, wherein the processor executes instructions to provide a user interface for use in adjusting the resolution of the 3D model.

18. The apparatus of claim 11, wherein the processor executes instructions to render the 3D model at its original resolution.

19. The apparatus of claim 11, wherein the elements comprise vertices of the 3D model.

20. The apparatus of claim 11, wherein the elements comprise polygons of the 3D model.

5 21. An article comprising a machine-readable medium that stores executable instructions for selecting a target object in virtual three-dimensional (3D) space, the instructions causing a machine to:

adjust a resolution of a 3D model;

10 project elements of the 3D model onto a surface in the virtual 3D space; and

render a shadow having the adjusted resolution of the 3D model on the surface using the projected elements.

15 22. The article of claim 21, wherein the elements of the 3D model are projected based on a location of a virtual light source in the virtual 3D space.

20 23. The article of claim 22, wherein the virtual 3D space includes a second virtual light source and the article further comprises instructions that cause the machine to:

adjust the resolution of the 3D model to a second resolution;

project elements of the 3D model onto a second surface in the virtual 3D space based on a location of the second virtual light source; and

- 5 render a second shadow having the second resolution on the second surface using the elements projected on the second surface.

24. The article of claim 21, wherein adjusting comprises reducing the resolution of the 3D model.

10 25. The article of claim 24, wherein adjusting comprises removing elements of the 3D model.

15 26. The article of claim 25, wherein the 3D model comprises a multi-resolution model.

20 27. The article of claim 21, further comprising instructions that cause the machine to provide a user interface for use in adjusting the resolution of the 3D model.

28. The article of claim 21, further comprising instructions that cause the machine to render the 3D model at its original resolution.

29. The article of claim 21, wherein the elements comprise vertices of the 3D model.

5 30. The article of claim 21, wherein the elements comprise polygons of the 3D model.